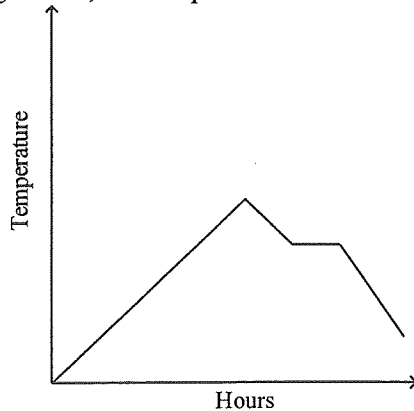


Multiple Choice

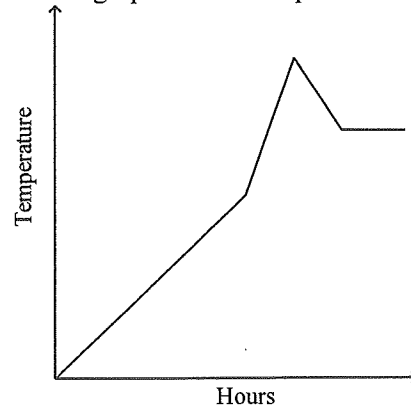
Identify the choice that best completes the statement or answers the question.

- _____ 1. Temperature changes throughout the hours of a day. Early in the morning, temperature increases slowly. At noon, the temperature rises sharply. During the afternoon, the temperature stays the same for several hours. As night falls, the temperature decreases slightly. Choose the graph that best represents this situation.

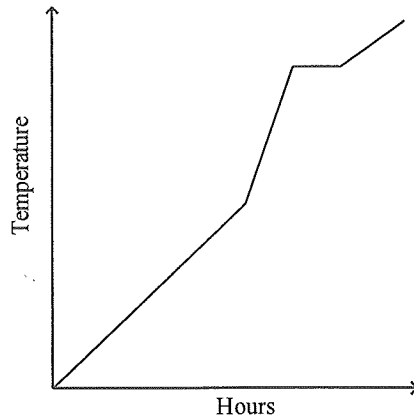
a.



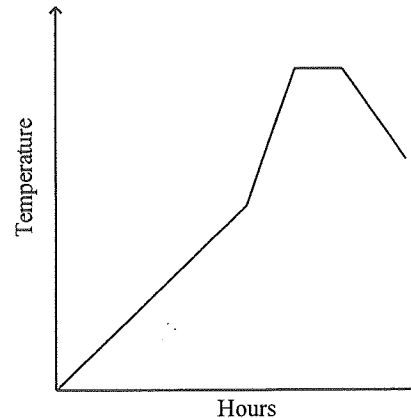
c.



b.



d.



- _____ 2. Which situation best describes a negative correlation?
- The size of a shoe and the size of the person's foot
 - The temperature on Tuesdays
 - The size of a sundae and the amount of calories it contains
 - The size of a snowball and how long it has been melting

Short Answer. SHOW ALL WORK!!

3. Evaluate the expression $y + q$ for $y = 4$ and $q = 2$.

4. Molly scored a total of 38 points in the basketball game, and she scored x points in the second half of the game. Write an expression to determine the number of points she scored in the first half of the game. Then, find the number of points she scored in the first half of the game if she scored 15 points in the second half of the game.

5. Evaluate the expression $2a + b$ for $a = 6$ and $b = 7$.

6. Add. $19 + (-15)$

7. Evaluate $x - (-13)$ for $x = -14$.

8. The highest temperature recorded in the town of Westgate this summer was 97°F . Last winter, the lowest temperature recorded was -12°F . Find the difference between these extremes.

9. Evaluate $-2u$ for $u = -6$.

10. Divide. $-55 \div 11$

11. Simplify $22 + 3[10 + (4)^2]$.

12. Evaluate $2 + n - 6 \cdot 8$ for $n = 8$.

13. Graph the point $(2, -4)$.

14. Solve $s - 5 = 73$.

15. Solve $s + 8 = 33$.

16. Solve $\frac{s}{7} = 27$.

17. Solve $8s = 136$.

18. Solve $\frac{3}{10}z = 72$.

19. Solve $44 = 12 - 2b$.

20. Solve $50b + 6 - 44b = 48$.

21. Solve $41q - 24 = 70q - 82$.

22. A video store charges a monthly membership fee of \$10, but the charge to rent each movie is only \$.50 per movie. Another store has no membership fee, but it costs \$1.50 to rent each movie. How many movies need to be rented each month for the total fees to be the same from either company?

23. The formula for the perimeter of a rectangle is $P = 2L + 2W$. Solve for L .

24. Solve $\frac{2x}{y} = 6$ for x .

25. Give the domain and range of the relation and state whether or not it is a function.

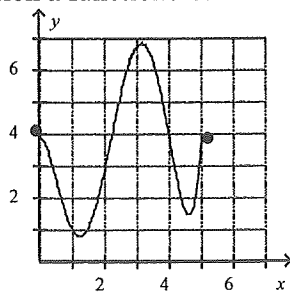
x	y
1	3
7	15
0	0
-6	-11

Domain:

Range:

Function?

26. Is this relation a function? State the domain and range.



Domain:

Range:

Function?

27. Give the domain and range of the relation. Tell whether the relation is a function.

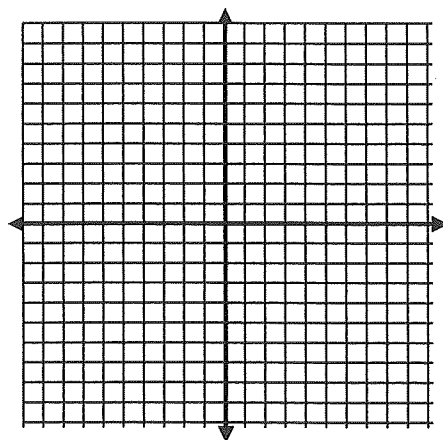
x	y
0	-4
1	-2
2	1
2	4

Domain:

Range:

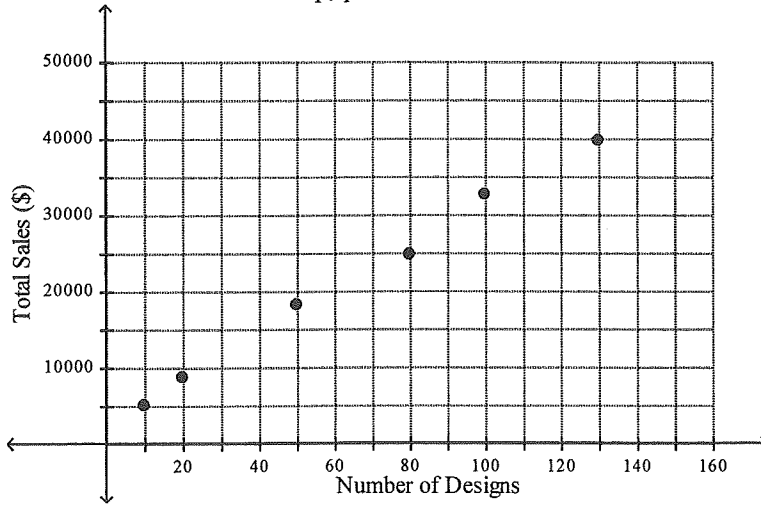
Function?

28. Graph the function $y = 2x - 2$.

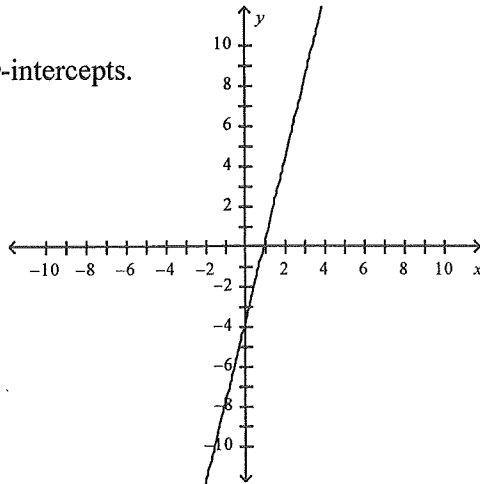


29. Data was collected on the average winter temperature and the number of days with snow of a random group of cities in the United States. Identify the correlation you would expect to see between the average winter temperature and the number of days with snow.

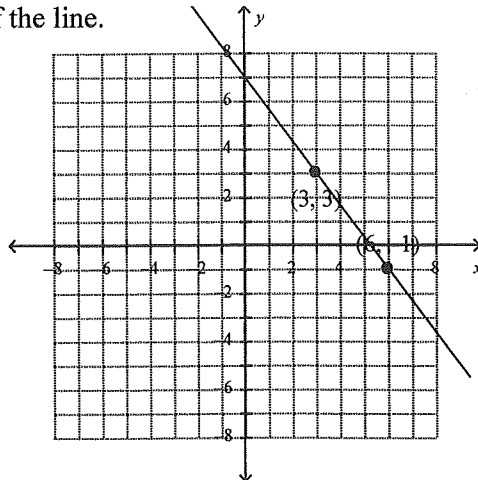
30. The scatter plot shows the relationship between the weekly total sales (\$) and the number of different rug designs a rug store has. Based on this relationship, predict what the total sales will be when the store has 160 different rug designs.



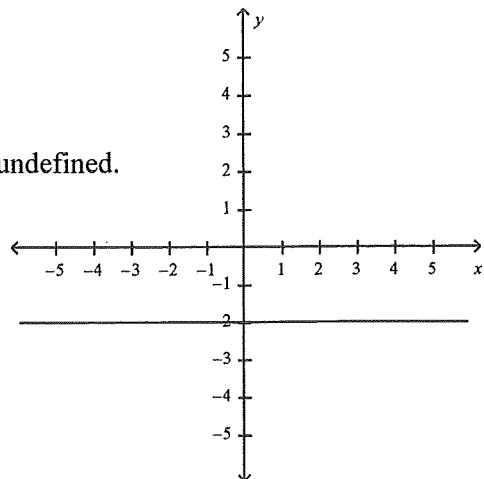
31. Find the x - and y -intercepts.



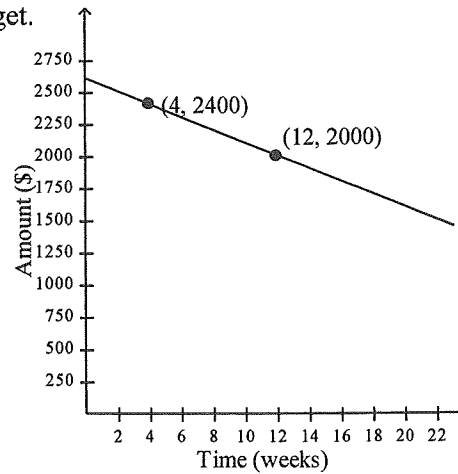
32. Find the slope of the line.



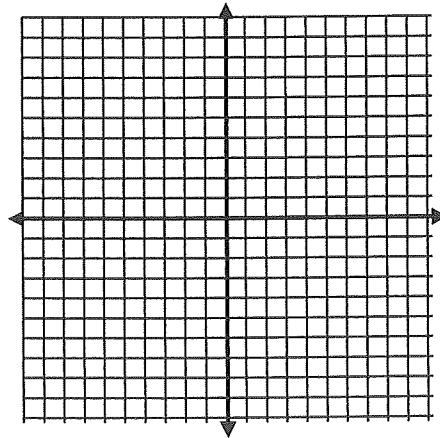
33. Tell whether the slope of the line is positive, negative, zero, or undefined.



34. Tara creates a budget for her weekly expenses. The graph shows how much money is in the account at different times. Write the equation for the line representing her budget.



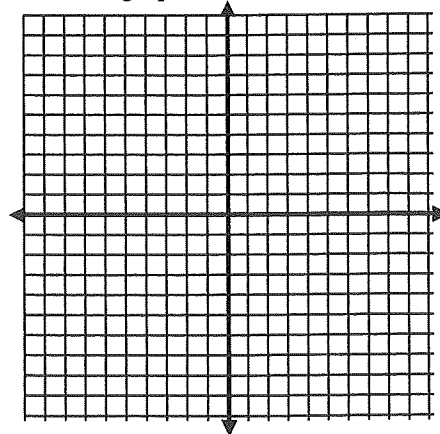
35. Graph the line with the slope $\frac{3}{2}$ and y -intercept -1 .



36. Write the equation that describes the line with slope $= \frac{1}{3}$ and y -intercept $= -5$ in slope-intercept form.

37. Write the equation that describes the line in slope-intercept form: slope $= 2$, point $(-1, 2)$ is on the line

38. Write the equation $-5x - 10y = 20$ in slope-intercept form. Then graph the line described by the equation.



39. Write an equation in point-slope form for the line that has a slope of $\frac{4}{5}$ and contains the point $(-3, 7)$.

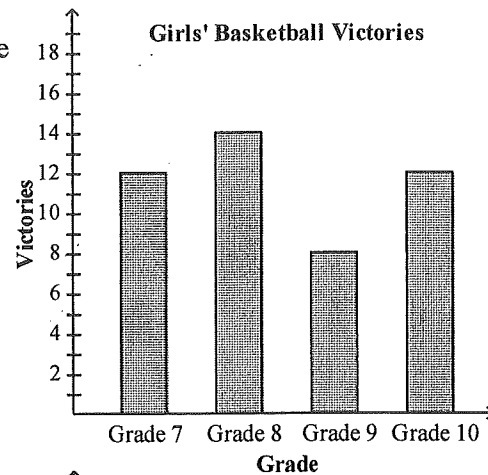
40. Write an equation in slope-intercept form of the line with slope -2 that contains the point $(-5, -4)$.

41. Write an equation in slope-intercept form for the line that passes through $(6, 8)$ and $(3, 1)$.

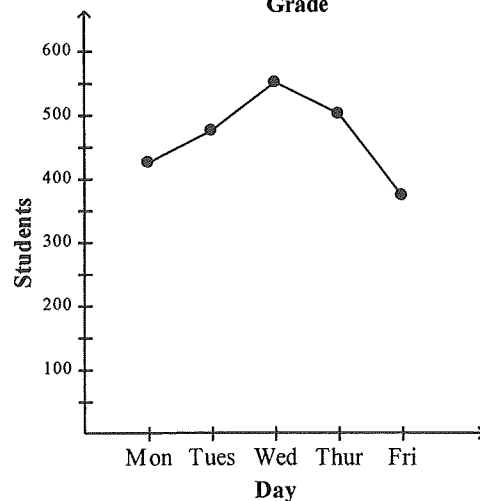
42. The cost to fill a car's tank with gas and get a car wash is a linear function of the capacity of the tank. The costs of a fill-up and a car wash for three different customers are shown in the table. Write an equation for the function in slope-intercept form. Then, find the cost of a fill-up and a car wash for a customer with a truck whose tank size is 29 gallons.

Tank size (gal) (x)	Total cost (\$) $f(x)$
11	22.55
13	26.15
20	38.75

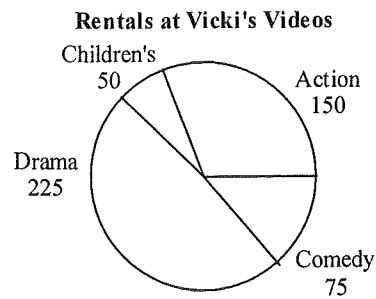
43. How many more victories did the 8th grade basketball team have than the 10th grade team? Use the graph to find the answer.



44. On which day did the greatest number of students buy lunch? Use the graph to find the answer.



45. What percent of the movies rented were comedy movies?
Use the graph to find the answer.



46. The daily low temperatures in degrees Fahrenheit in a city for February 1–14 are given. Use the data to make a stem-and-leaf plot.

Daily Low Temperatures (°F)						
17	22	20	18	22	27	16
21	26	39	30	25	19	26

Stem	Leaves

47. Constellations are made up of more than one star. The table shows the number of stars that make up various constellations. Find the mean, median, mode, and range of the data set.

Constellation Number	Number of Stars in Constellation
Constellation 1	11
Constellation 2	14
Constellation 3	44
Constellation 4	11
Constellation 5	50

Mean:

Median:

Mode:

Range:

48. The monthly rents for five apartments advertised in a newspaper were \$700, \$700, \$790, \$1600, and \$840. Find the mean, median, and mode of the rents to answer the question. Which value best describes the monthly rents? Explain.

Mean:

Median:

Mode:

49. The number of calls answered by a paramedic team over an 8-day period are given. Use the data to make a box-and-whisker plot:
13, 7, 9, 10, 17, 8, 13, 20

(Find the five-number summary first)

